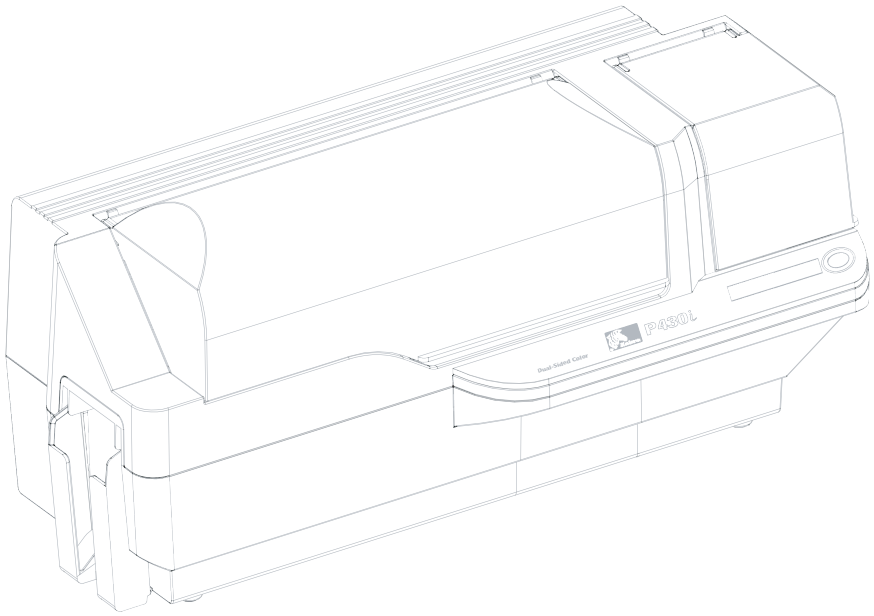
Zebra® P430*i*
Card Printer

User's Manual

VAN MECHELEN
KANTOORMACHINES – KANTOORMATERIALEN
TURNHOUT –GEEL
www.vanmechelen.be

Zebra®
Card Printer Solutions

980470-001 Rev. A


P430i
Dual-Sided Color

Foreword

This manual contains installation and operation information for the Zebra P430i Card Printers manufactured by Zebra Technologies Corporation, Camarillo, California.

Return Materials Authorization

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Administration for a Return Materials Authorization (RMA) number. Repack the equipment in the original packing material and mark the RMA number clearly on the outside. Ship the equipment, freight prepaid, to the address listed below:

- For USA, Latin America, and Asia / Pacific:
  Zebra Technologies Corporation
  Zebra Card Printer Solutions
  1001 Flynn Road
  Camarillo, CA. 93012-8706.USA
  Phone: +1 (805) 578-5001
  FAX: +1 (805) 579-1808

- For Europe and Middle East:
  Zebra Technologies Corporation
  Zebra Card Printer Solutions
  Pittman Way, Fulwood
  Preston, PR2 9ZD
  Lancashire, U.K.
  Phone: +44 - 1 - 772 - 797555
  FAX: +44 - 1 - 772 - 693000

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Trademarks

P430*i* is a trademark and Zebra is a registered trademark of Zebra Technologies Corporation. Windows and MS.DOS are registered trademarks of Microsoft Corp. All other trademarks or registered trademarks are marks of their respective holders.

Product Disposal

Product Disposal Information • Do not dispose of this product in unsorted municipal waste. This product is recyclable, and should be recycled according to your local standards. For more information, please see our web site at: http://www.zebra.com/environment

Declarations of Conformity

FCC Regulations

Model P430*i* has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and operated in accordance with the P430*i* User's Manual, may cause harmful interference to radio communications Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE

89/336/EEC modified by 92/31/EEC and 93/68/EEC	EMC Directive	EN 55022 (1998)	RF Emissions control
	EMC Directive	EN 301489-3 V1.4.1	RF Emissions and Immunity for radio equipment
	EMC Directive	EN55024 (2001)	Immunity to Electro-Magnetic Disturbances
73/23/EEC modified by 93/68/EEC	Low voltage Directive	EN 60950-1 (2001)	Product safety
1999/5/CE	R&TTE Directive	EN300330-2 V1.1.1	Radio Frequency Interferences

For a formal certificate, please contact the Compliance Office at Zebra's Camarillo facility.

EUROPE: Norway Only: This product is also designed for IT power system with phase to phase voltage 230V. Earth grounding is via the polarized, 3-wire power cord.

FI: "Laite on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan"

SE: "Apparaten skall anslutas till jordat uttag"

NO: "Apparatet må tilkoples jordet stikkontakt"

Industry Canada Notice

This device complies with Industry Canada ICES-003 class A requirements.

Cet equipement est conforme a l'ICES-003 classe A de la norm Industrielle Canadian.

P430*i* Printer Model

The Zebra Product Number tells a story:

Here is a quick review of the Zebra Card Printer Series numbering and lettering system to help you.

Model numbers include identifiers that specify options using the following lettering conventions:

Part Number	Description
P 4 3 0 *i* - _ _ _ _ _ - _ _ _	**Base Printer** P430*i* Color Card Printer
_ _ _ _ _ - 0 _ _ _ _ - _ _ _ _ _ _ _ _ - B _ _ _ _ - _ _ _ _ _ _ _ _ - C _ _ _ _ - _ _ _ _ _ _ _ _ - D _ _ _ _ - _ _ _ _ _ _ _ _ - E _ _ _ _ - _ _ _ _ _ _ _ _ - F _ _ _ _ - _ _ _ _ _ _ _ _ - H _ _ _ _ - _ _ _	**Smart Card Options** None Contact Encoder Contact encoder & HID *i*CLASS Contact encoder & MIFARE contactless Contact station HID *i*CLASS MIFARE contactless
_ _ _ _ _ - _ 0 _ _ _ - _ _ _ _ _ _ _ _ - _ M _ _ _ - _ _ _	**Magnetic Encoder** None Yes (select defaults below)
_ _ _ _ _ - _ _ 0 _ _ - _ _ _ _ _ _ _ _ - _ _ 1 _ _ - _ _ _ _ _ _ _ _ - _ _ 3 _ _ - _ _ _	**Magnetic Encoder Defaults** None Stripe Down, HiCo Stripe Up, HiCo
_ _ _ _ _ - _ _ _ 0 _ - _ _ _	**Memory Expansion** None
_ _ _ _ _ - _ _ _ _ A - _ _ _ _ _ _ _ _ - _ _ _ _ C - _ _ _	**Interface** USB Only USB and Ethernet
_ _ _ _ _ - _ _ _ _ _ - I _ _ _ _ _ _ _ - _ _ _ _ _ - U _ _	**Power Cords** U. S. and Europe U. K. and Australia
_ _ _ _ _ - _ _ _ _ _ - _ D 0	**Windows Drivers and User Documentation / Training CD** Windows Drivers and User Documentation / Training included on one CD (Software & Documentation Package) which contains Multi-language documentation

Icons

Throughout this manual, different icons highlight important information, as follows:

Note • Indicates information that emphasizes or supplements important points of the main text.

Important • Advises you of information that is essential to complete a task, or points out the importance of specific information in the text.

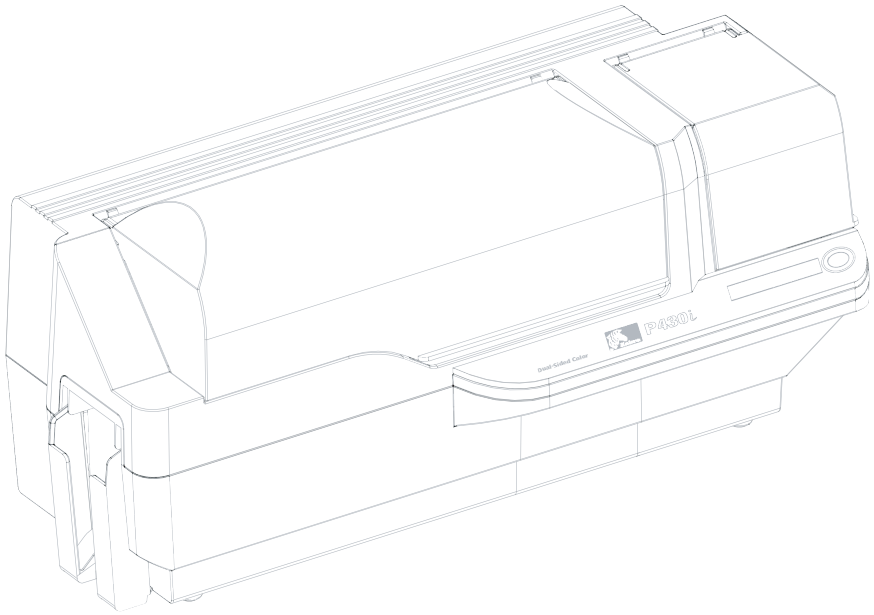
Provides an example or scenario to demonstrate or clarify a section of text.

Electrostatic Discharge Caution • Warns you of the potential for electrostatic discharge.

Electric Shock Caution • Warns you of a potential electric shock situation.

Caution • Warns you of a situation where excessive heat could cause a burn.

Caution • Advises you that failure to take or avoid a specific action could result in physical harm to you, or could result in physical damage to the hardware.


P430i

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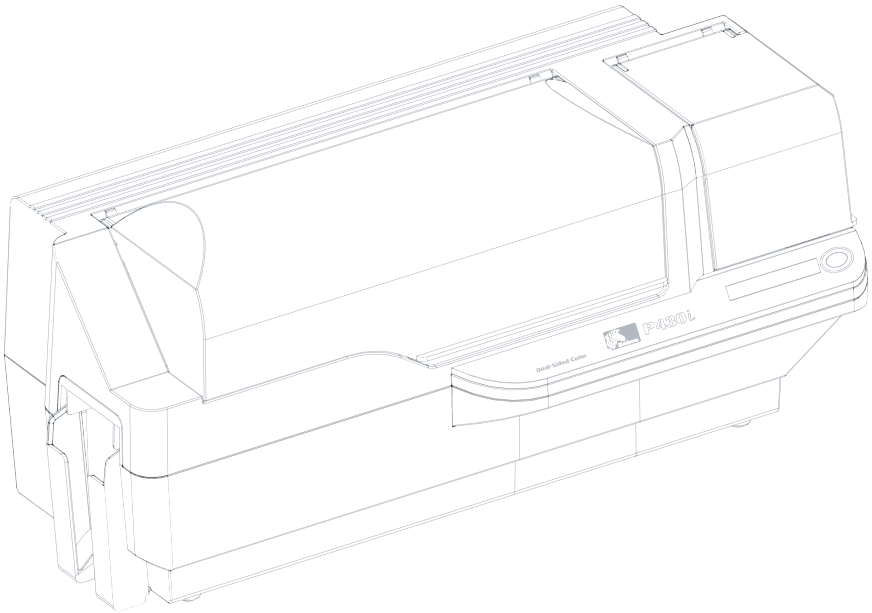
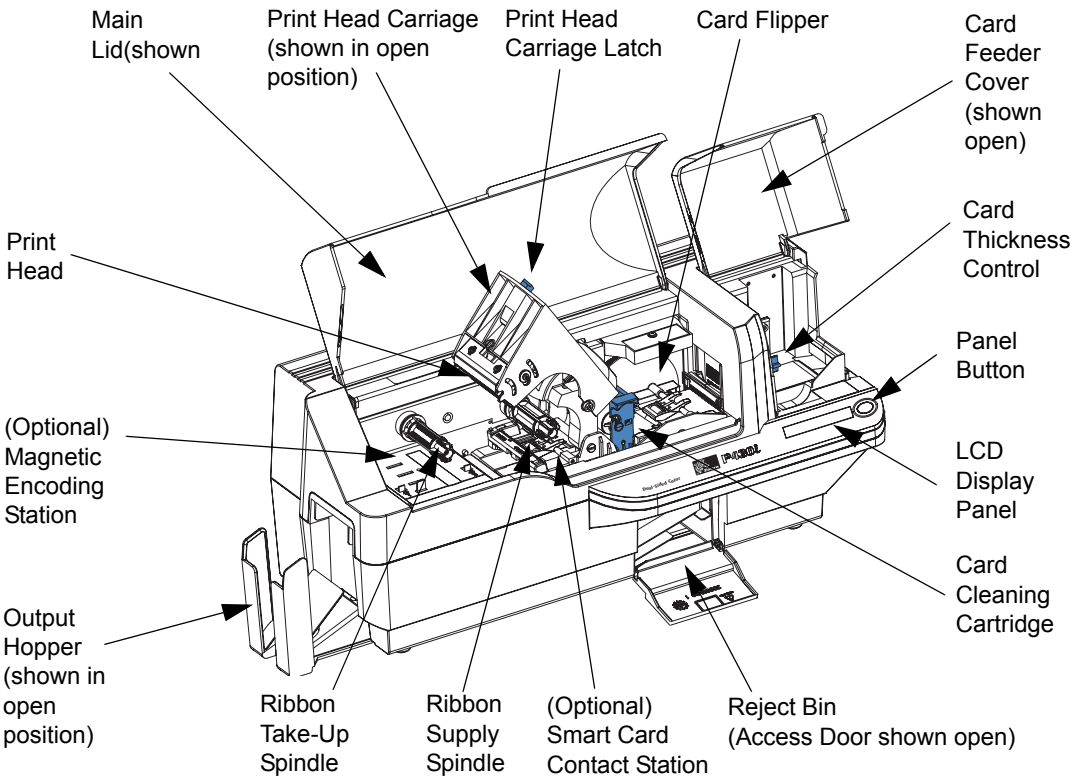

P430i

1 Introduction

Thank you for choosing the Zebra P430*i* Card Printer. This manual guides you to efficient start up and operation of your new Card Printer.

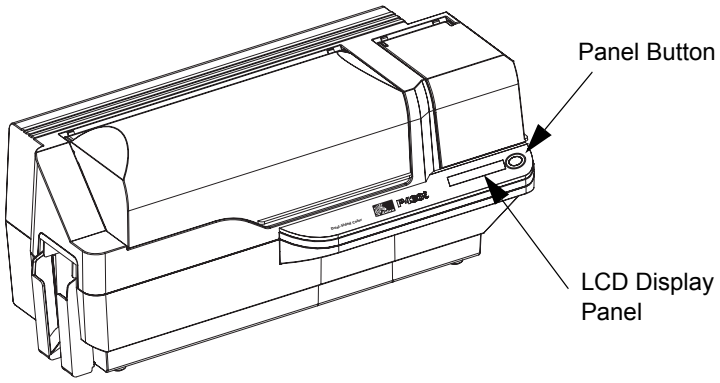
Printer Features

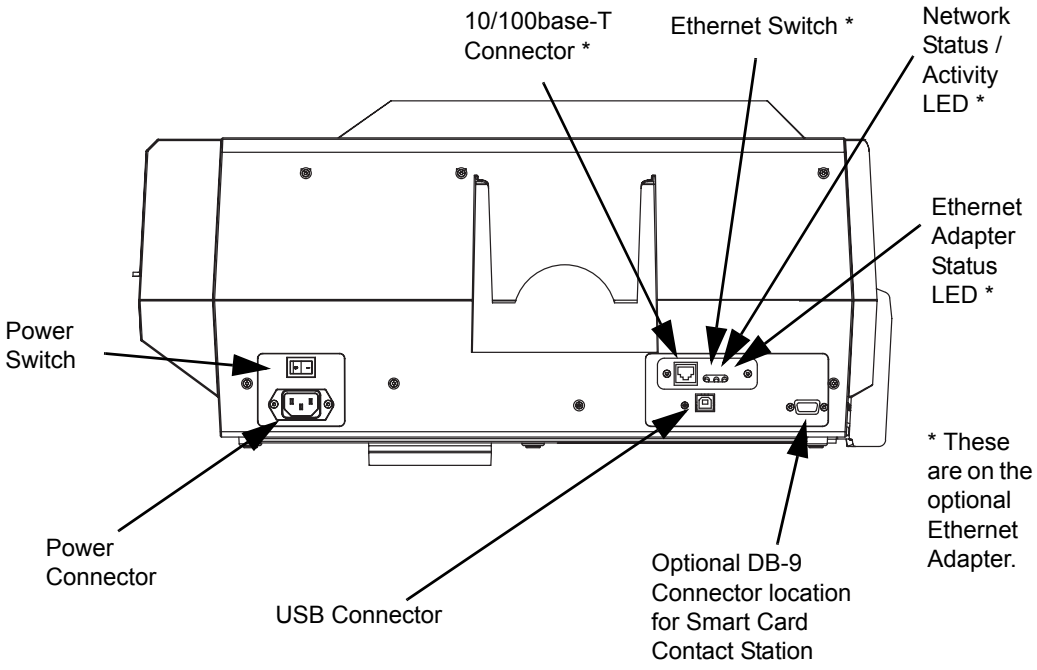
The following shows the main functional features found on your P430*i* Printer.



Controls, Connectors, and Indicators

Your P430*i* Printer has an LCD Display Panel and a Panel Button on the front and a power connector, power switch, and interface connector(s) on the rear panel.




10/100base-T Connector *
Ethernet Switch *
Network Status / Activity LED *
Ethernet Adapter Status LED *
Power Switch
Power Connector
USB Connector
Optional DB-9 Connector location for Smart Card Contact Station
* These are on the optional Ethernet Adapter.

LCD Panel

The LCD Panel can display the following messages:

Message	Mode
Operational	
Initializing	Scrolling
SELF TEST	Scrolling
READY	Fixed
DOWNLOADING DATA	Fixed
PRINTING MONO	Fixed
MAG ENCODING	Fixed
CONTACT ENCODING	Fixed
CONTACTLESS ENCODING	Scrolling
PRINTING CYAN	Fixed
PRINTING YELLOW	Fixed
PRINTING MAGENTA	Fixed
PRINTING BLACK	Fixed
PRINTING OVERLAY	Fixed
DOWNLOADING FW	Fixed
Warnings (Printer will still Operate)	
CLEAN PRINTER	Scrolling
ENCODING ERROR (printing stops)	Blinking
CONTACT ERROR	Blinking
CONTACTLESS ERROR	Scrolling
INVALID MAGNETIC DATA (encoding stops)	Scrolling
INVALID CONTACT DATA (encoding stops)	Scrolling
INVALID CONTACTLESS DATA (encoding stops)	Scrolling
EMPTY FEEDER & PRESS BUTTON	Scrolling
Cleaning	
CLEANING PRINTER	Blinking
REMOVE RIBBON THEN CLOSE HEAD	Scrolling
EMPTY FEEDER & PRESS BUTTON	Scrolling
LOAD CLEANING CARD INTO FEEDER	Scrolling
PRESS BUTTON TO CONTINUE	Scrolling
FEED LONG CLEANING CARD IN EXIT	Scrolling

Message	Mode
CLEANING PRINTER	Blinking
Errors (Printer will not operate)	
BROKEN RIBBON	Blinking
OUT OF RIBBON	Blinking
MECHANICAL ERROR	Blinking
OUT OF CARDS	Blinking
PRINT HEAD OPEN	Blinking
CHECK RIBBON	Blinking
REJECT BOX FULL	Blinking
LID OPEN	Fixed
COMMAND ERROR	Blinking

2

Installation and Setup

General Information

This section will guide you through the installation and setup of your P430*i* Card Printer. This consists of the following procedures, which should be performed in the order presented.

- Unpacking the Printer
- Installing the Print Driver Software and Setting Driver Options
- Loading a Ribbon
- Installing the Card Cleaning Cartridge
- Setting the Card Thickness Control
- Loading Cards
- Connecting the Printer to your Computer
- Connecting Power
- Printing a Test Card to verify printer operation

The procedure to be followed for Packing the Printer for Shipment is given at the end of this section.

The printer should be placed in a location that allows easy access to all sides. The printer should never be operated while resting on its side or upside down.

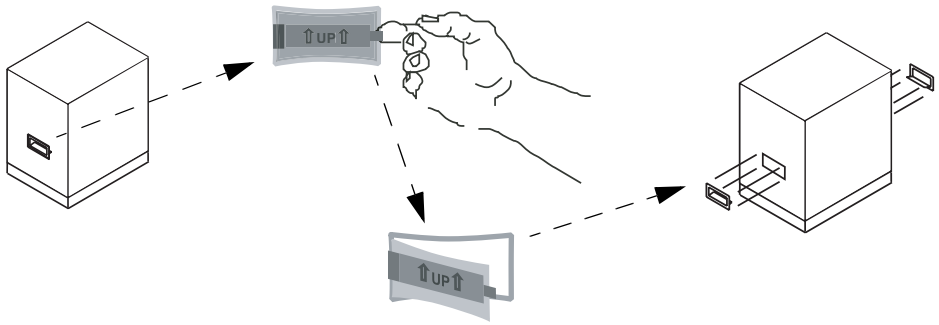
Electric Shock Caution • Limit AC power supplied to the P430*i* Printer to 100 – 230 volts, 60 ~ 50 Hertz. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device. Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result. The printer must be connected to an earthed electrical power source and properly protected against electrical surges and grounding faults; the electrical reliability of the printer is based on the reliability of the mains power source and with the earth connection.

The printer's power supply is an internal unit that can only be serviced or replaced by trained and authorized personnel.

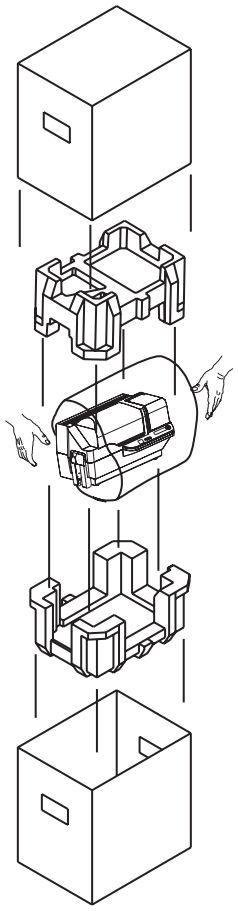
Unpacking the Printer

Your P430*i* Card Printer ships in a carton and protective anti-static bag. Keep all packaging material in case you need to move or re-ship the printer.

1. Inspect the shipping container to ensure that no damage has occurred during shipment. If any damage is apparent, file a claim with the shipper.
2. Unlatch and remove the handles on either end of the shipping container, as shown in the figure below.

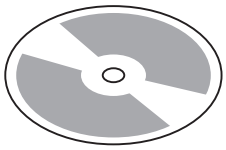


3. (See the figure on the next page as you perform the following steps.) Lift the upper part of the shipping container off of the lower part (which will still hold the printer and its packing material).
4. Remove the packing material around the top of the printer.

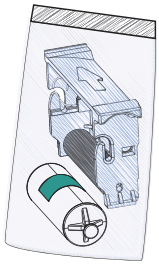


5. Lift the printer out of the carton by holding it with both hands.
6. Please ensure that you have a clean and nearly dust free environment for proper operation and storage of the printer.
7. Make sure the following items are included with your P430*i* printer:

CD-ROM with Driver Wizard and User's Manual

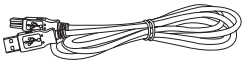


Card Cleaning Cartridge

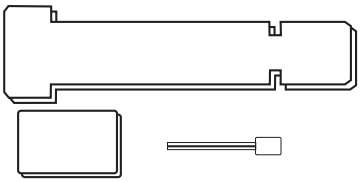


Power Cables (2)

USB Cable

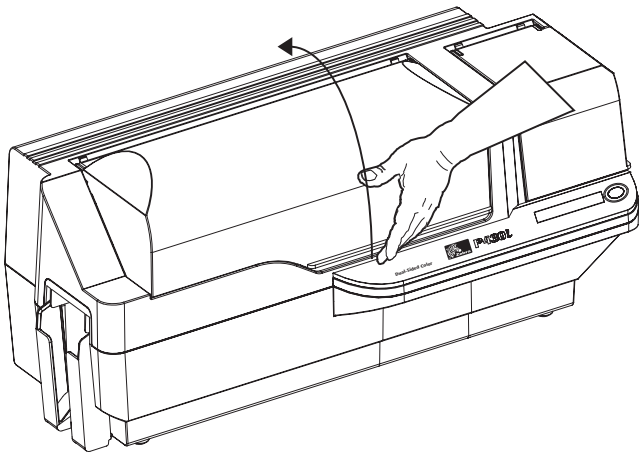


Cleaning Kit

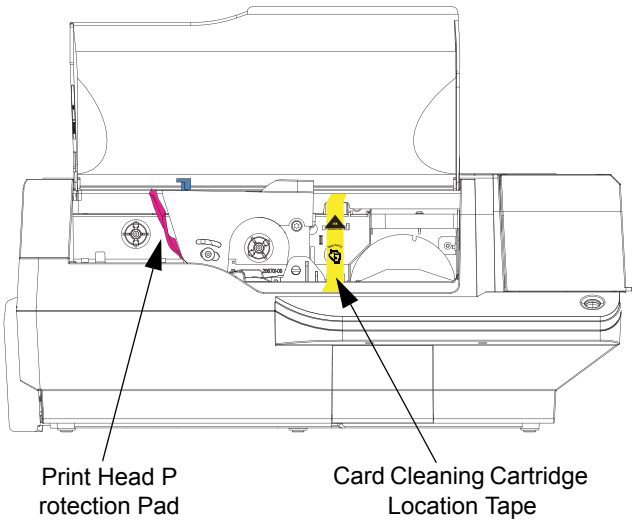


If any items are missing, please contact your dealer. To reorder, please refer to Appendix D of this manual.

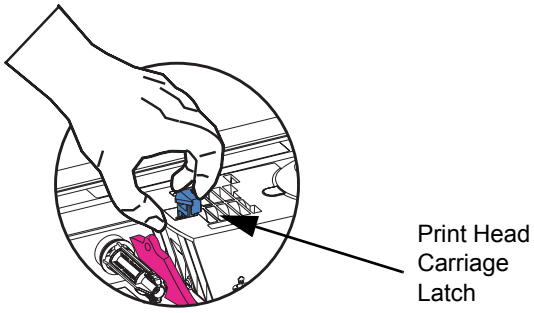
8. Remove packing tape securing the printer's Main Cover and Card Feeder Cover.
9. Your P430i Printer ships with warning tape where the Card Cleaning Cartridge will be installed, and a pad that protects the print head from possible damage in shipment. To remove the tape and pad, follow the following steps:
   a. Open the printer's main lid by lifting at its lower front lip.

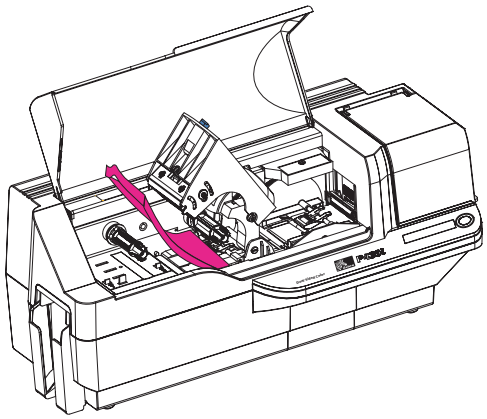


b. Locate the Print Head protection pad and the Card Cleaning Cartridge location tape (see below). Remove the tape.

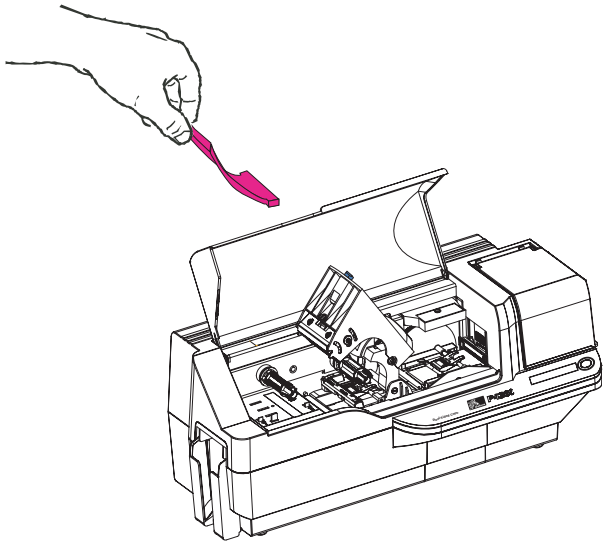


c. Release the Print Head Carriage by pushing the Print Head Carriage Latch to the left, and raise the Print Head Carriage. It will remain open at about a 45° angle.





d. Remove the print head protection pad. Keep the pad, as well as the other packing material and the shipping carton, in case the printer is shipped or moved. If the original material is lost, a replacement Shipping Kit can be ordered from your reseller.



Installing the Print Driver Software and Setting Driver Options

Printing with the P430*i* Printer requires the Windows Printer Driver and your card design/issuing software or printer command level programming through the printer interface.

The P430*i* Card Printer can be used with any Windows 2000 or Windows XP computer, using the drivers provided on CD with the printer.

This section contains information on the printing of a sample card in color (using the 5-panel color ribbon YMCKO and the Windows Printer Driver).

Note • If updating the printer driver from a previous version, before installing the updated printer driver version, always delete the existing version from your computer.

Installing the P430*i* Print Driver

To install the P430*i* Printer Driver automatically on all Operating Systems, use the Zebra Install Wizard.

Note • Ensure that you have administrative privileges to perform this installation, or contact your IT department.

The Install Wizard will walk you through the appropriate installation steps. The Wizard will:

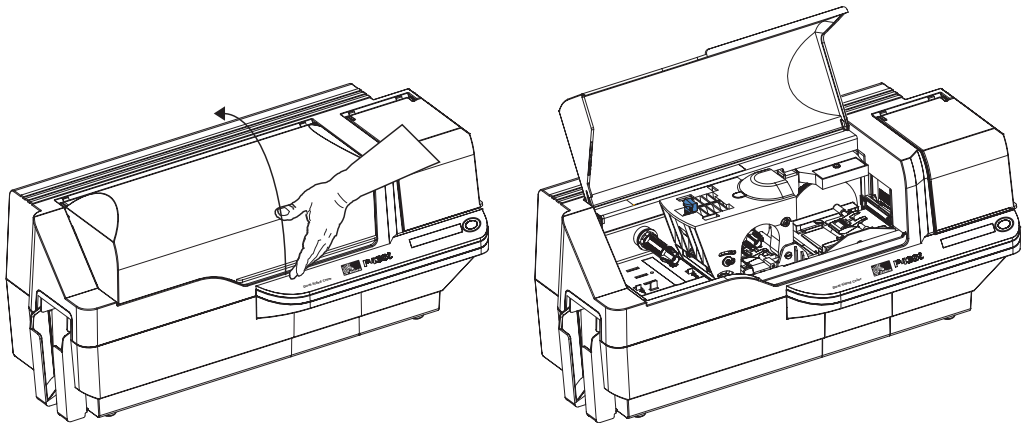
- Automatically launch when the driver CD is inserted.
- From the main menu of your documentation CD, select your desired language and then select “DRIVERS” from the subsequent menu. The Install Wizard will walk you through the appropriate steps.

- Delete previous versions of the driver and clean up any necessary Registry entries. You must select "Remove" from the install options to remove any previous driver versions.

Loading a Ribbon

i Series Printers require the use of *i* Series ribbons for full color printing. The Resin Thermal Transfer and Dye Sublimination ribbons for P430*i* are specifically designed for your P430*i* Printer.

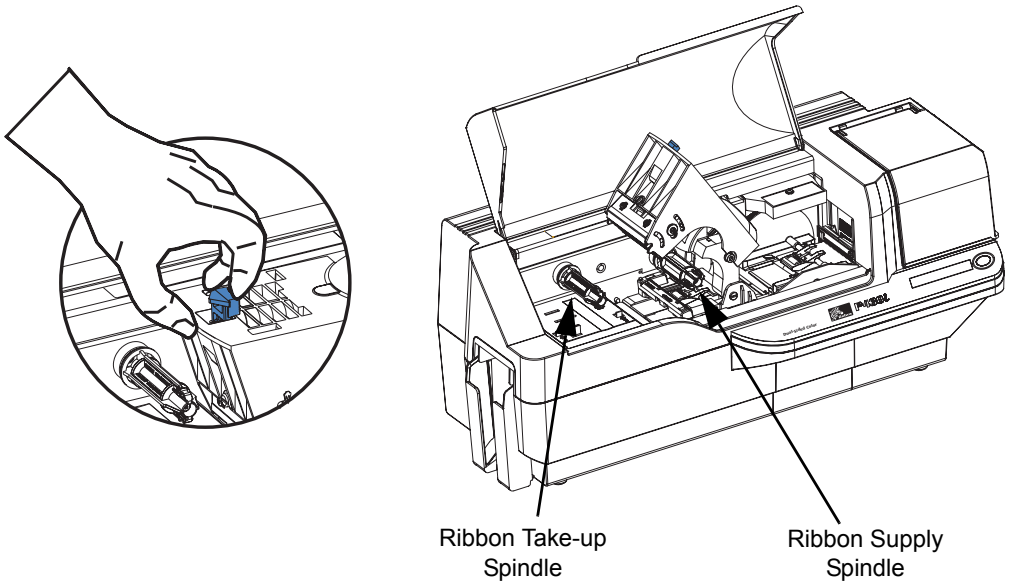
1. Place the printer power switch in the OFF (0) position.
2. If the printer's Main Lid is closed:
   a. Open the printer's Main Lid; lift it by the lip at the bottom front as shown in the figure below left.



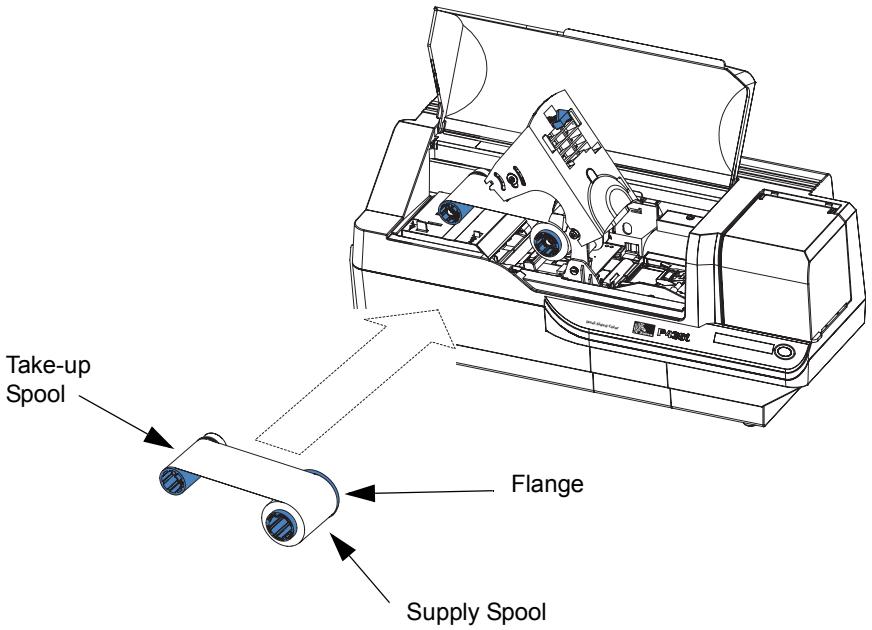
Electrostatic Discharge Caution • **DO NOT TOUCH** the Print Head or the electronic components on the Print Head Carriage. Discharges of electro-static energy that accumulate on the human body or other surfaces can damage the Print Head or other electronic components used in the printer.

Note • Avoid any direct contact with the print head to prevent transfer of oils or contamination. Outside of normal operation, only the Zebra-approved cleaning materials should come in contact with the print head.

   b. Raise the Print Head Carriage by pressing the release latch to the left (toward the output hopper) and lifting as shown below to about a 45° angle. The Print Head Carriage will stay in that position, as shown at the right below.



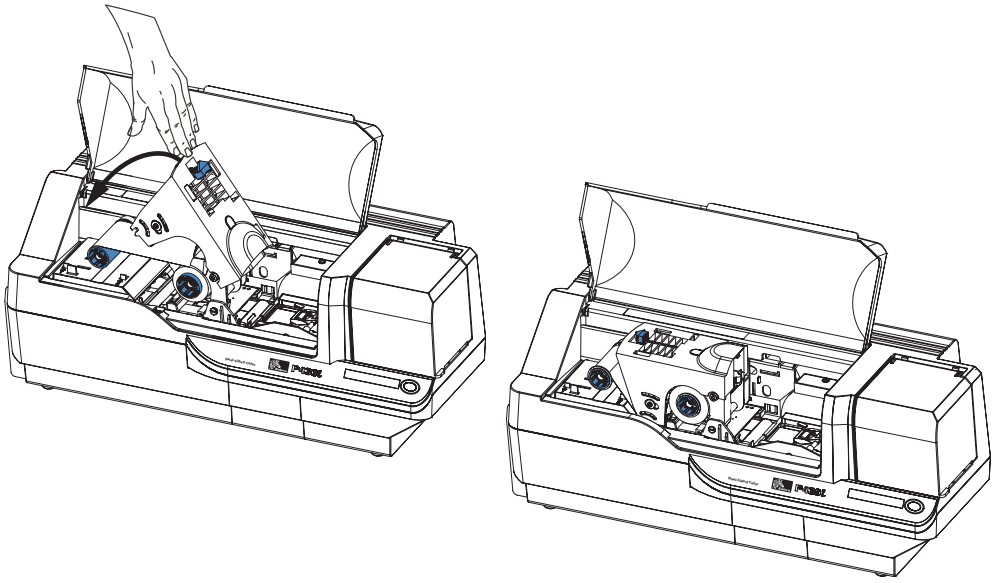
3. Locate the Ribbon Supply Spindle and the Ribbon Take-up Spindle (see above). Load ribbon onto the supply spindle (under the print head carriage) **flange side in**, and load the empty core (with tape attached) onto the take-up spindle. Make sure the ribbon comes off the top of the supply spindle and feeds to the top of the take-up spindle.



Caution • Do not touch the print head if the printer has been in service within the last 10 minutes. It could be very hot and cause a burn.

Electrostatic Discharge Caution • A static discharge is possible if you touch any exposed metal parts. Use of an anti-static wrist strap or comparable anti-static protection is required.

4. Gently press the print head carriage down until it is fully lowered, as shown below. Very little force is neccessary to perform this step.



Note • During normal operation (with power connected and turned on), the ribbon would automatically synchronize when the Print Head is restored to its fully-down position. The ribbon would be identified and the corresponding parameters sent to the driver.

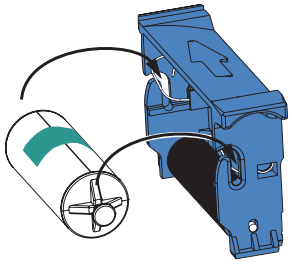
Since power is not connected at this point in the Installation and Setup Procedure, nothing will happen when the Print Head Carriage is closed. The ribbon will synchronize when power is turned on.

Installing the Card Cleaning Cartridge

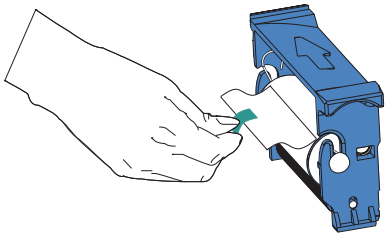
The Card Cleaning Cartridge cleans the cards entering the printer. The Card Cleaning Cartridge consists of a Cartridge Frame and an Adhesive Roller, which are packed together.

1. Remove the Cartridge Frame and the Adhesive Roller from their packaging. Insert the Adhesive Roller into the Cartridge Frame, as shown below. To avoid contamination, always hold the frame and the roller by the ends.

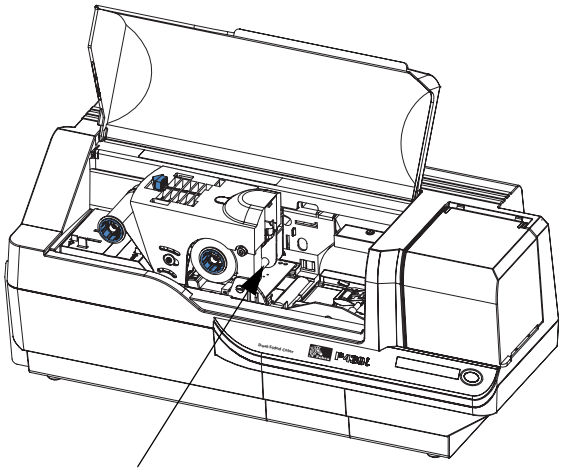
.



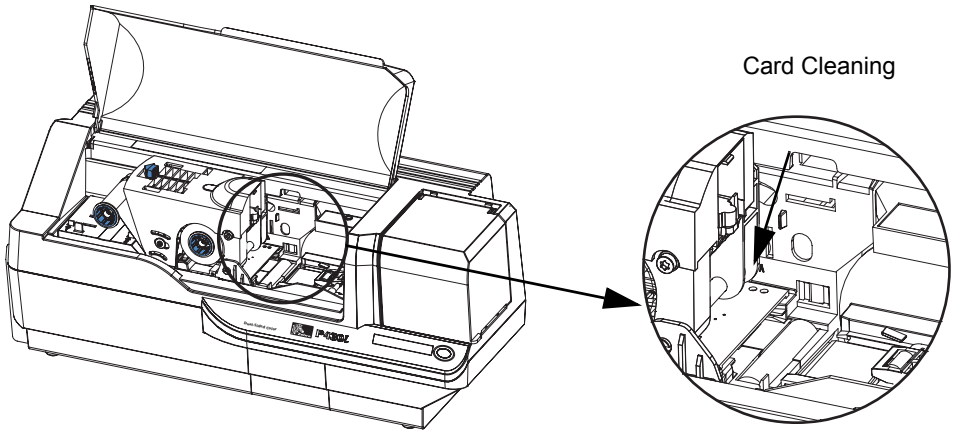
2. Peel the protective wrapper from the Adhesive Roller.



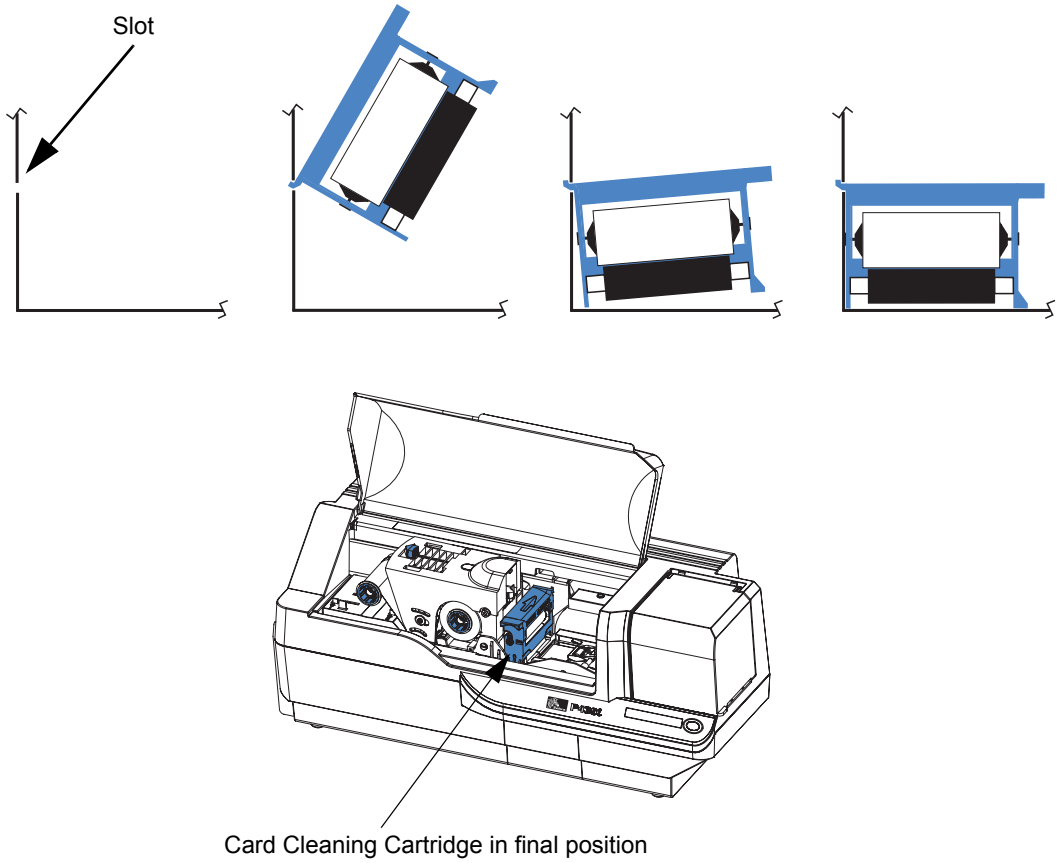
3. If the printer's Main Lid is closed, open it. Locate the area where the Card Cleaning Cartridge will be installed (initially, this area was covered by a warning tape).



4. Locate the slot at the rear of the Card Cleaning Cartridge mounting location; see below.



5. Hold the Card Cleaning Cartridge by the extended “handle” (so the large arrow on the top is pointing away from you). With the cartridge at about a 30° angle (pointing downward), insert the lip of the cartridge into the slot, until the cartridge seats against the back wall. Then press the front of the cartridge down until it seats all the way down and latches with an audible “click”. See below.



6. Close the printer’s Main Lid.

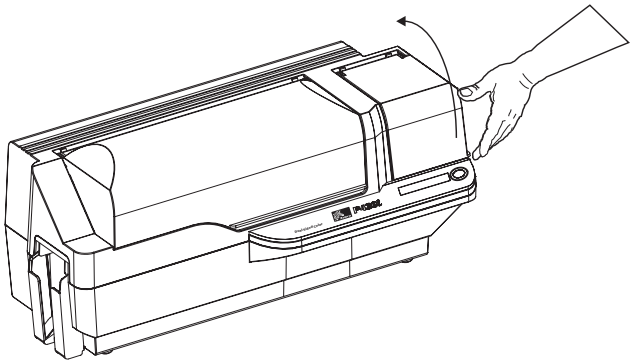
Setting the Card Thickness Control

The Card Thickness Control is set by the user to adjust the gap as cards enter the printer, to prevent double-feeds (which could cause a jam) or mis-feeds.

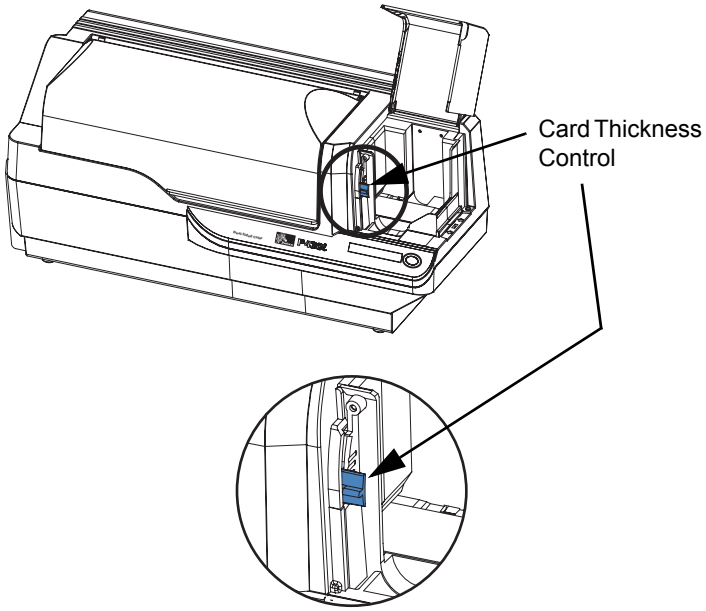
Note • Set the Card Thickness Control before loading cards.

1. Open the Card Feeder cover. The cover is hinged; lift it by the lip at the right front corner.

Note • To reduce contamination and ensure better print quality, minimize the time the Card Feeder cover is open.



2. The Card Thickness Control Lever is at the front of the left-side opening of the Card Feeder area.



3. There are four detents to set the position of the Card Thickness Control. Slide the Card Thickness Control to the position corresponding to the following:

Detent Position	Card Thickness
Highest	50 mil (1.27 mm) to 60 mil (1.52 mm)
3rd position	30 mil (0.76 mm) to 50 mil (1.27 mm)
2nd position	20 mil (0.51 mm) to 40 mil (1.02 mm)
Lowest	10 mil (0.25 mm) to 20 mil (0.51 mm)

Note • The overlap in settings above accomodates variations in environmental conditions (especially humidity) and cards from different manufacturers. In general, start at the lowest position and move the lever up until cards feed reliably.

Note • “60 mil” (“1.524 mm”) cards may have a significant variation (over 10%) in the actual thickness of the cards; do not use these cards unless each card has been measured to have a thickness less than 66 mil (1.676 mm).

Loading Cards

This section shows how to load plastic cards into the P430*i* Printer. The P430*i* can use cards with a range of thickness from 10 mil (0.25 mm) to 60 mil (1.5 mm).

Note • Do not mix cards of different thicknesses!

The P430*i* Printer can also load and print cards fed individually. Information on this is given in the next chapter.

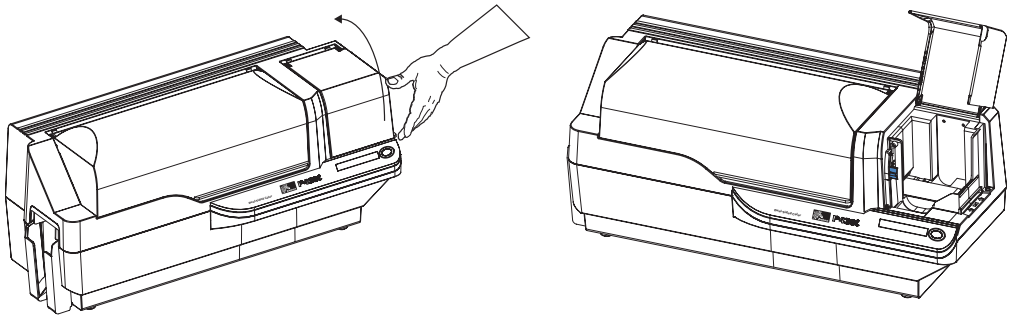
Note • DO NOT bend cards or touch print surfaces as this can reduce print quality. The surface of the cards must remain clean and dust free. Always store cards in an enclosed container. Ideally, use cards as soon as possible.

Note • For cards with magnetic stripe, refer to Appendix A for loading instructions.

The plastic cards generally come in decks of 100 cards; the Card Feeder can hold a full deck of 100 30-mil cards. Cards sometimes will stick together; this can cause mis-feeding or double-feeding. To avoid this, separate the cards before loading, as described in steps 2 through 4 below.

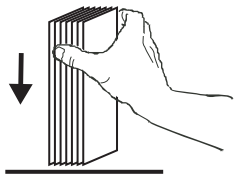
1. If the Card Feeder cover is closed, open it. The cover is hinged; lift it by the lip at the right front corner.

Note • To reduce contamination and ensure better print quality, minimize the time the Card Feeder cover is open.

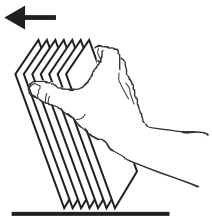


Caution • Do not touch print surfaces of the cards; this can reduce print quality

2. Remove all wrapping from the card deck.
3. Holding the card deck by the sides, hold it vertically against a flat surface such as a desktop. If the deck is too thick for your hand to hold it comfortably, use about half a deck at a time.

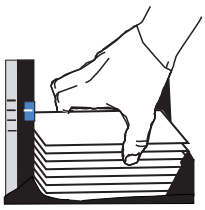


4. Push the stack back and forth to an angle of about 45° from vertical, so as to separate all of the cards.



Note • Static charges and edge burrs from the card die-cutting process can render individual cards stuck together with significant adhesion force. These cards must be physically separated from each other before inserting into the feeder; if not separated, feeding or printing problems may occur.

5. Restore the card stack to its original squared-off condition, and place the cards in the input hopper.



6. Note that there will be a "gap" in the card stack, with several cards lying flat and the cards above angled upward, as shown in the exaggerated drawing below. **This is normal** and ensures proper feeding.

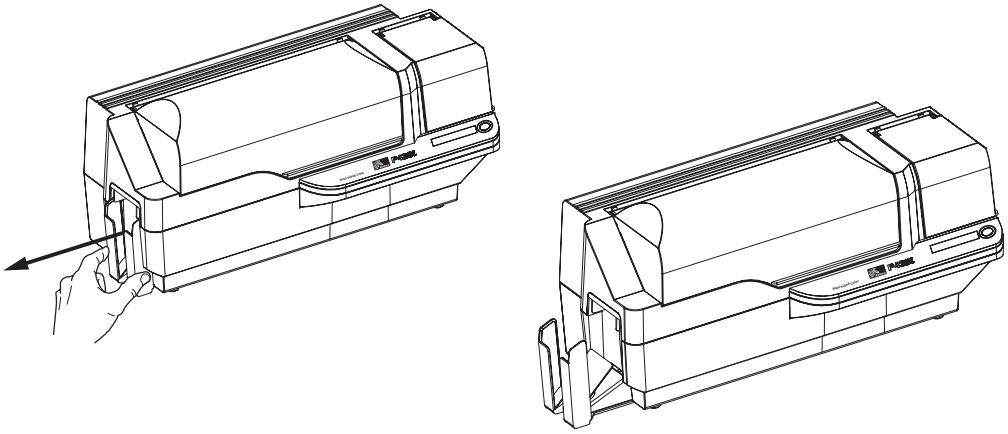
Note • Do not try to eliminate the gap by pressing down on the card stack in the input hopper; this can cause misfeeds.

Card Output Hopper

The card output hopper is normally extended to receive the printed cards. The printer may be operated with the card output hopper in its closed position; in this case the cards will not be collected in the output hopper.

1. Pull the card output hopper out to place it in its functional position.

Note • The output hopper is a very snug fit to prevent it from moving during shipping or operation; firm force is required to change its position.



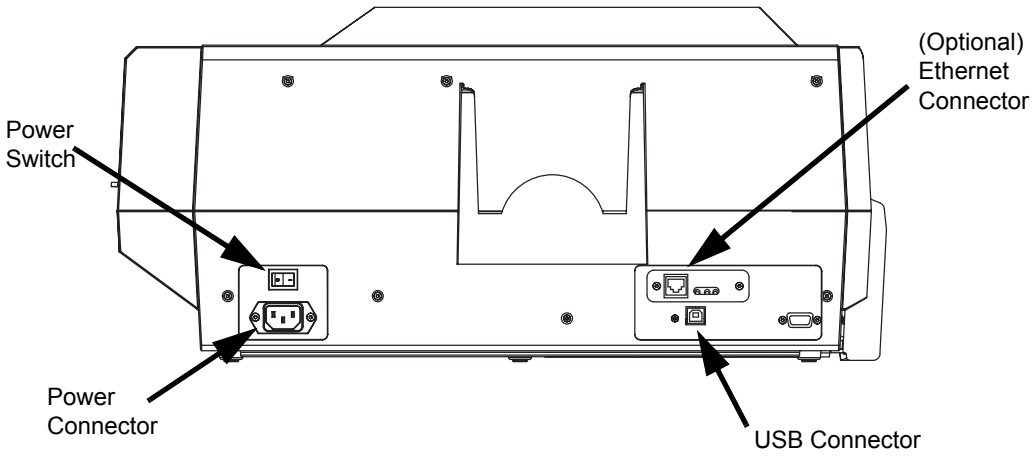
2. When not using the printer, slide the card output hopper back into its closed position to protect the printer from dust and protect the output hopper from damage.
3. The output hopper can be completely removed from the printer if necessary by inserting a thin, blunt object (such as a pencil) up through the hole in the bottom of the printer enclosure and pressing (up) to release the hopper while simultaneously pulling the hopper out. To re-install the output hopper, simply slide the output hopper in until it locks in place.

Connecting the Printer to your Computer

The P430i Printer includes a standard USB interface.

As an option, the printer can be ordered with a 10/100base-T Ethernet Adapter (in addition to the USB interface). The Ethernet Adapter can also be ordered as an add-on option and installed in the field by a Zebra factory certified technician.

1. If using the USB interface, use the supplied USB cable to connect between the USB connector on the printer and a USB port on the computer, as shown below. (Note that the figure below shows the optional Ethernet Adapter directly above the USB Connector; this may not be present on your printer.)



2. If your printer includes the optional Ethernet Adapter as well as the standard USB connection, use **either** the supplied USB cable or a standard Ethernet cable to connect the printer to a corresponding port on the computer or network.

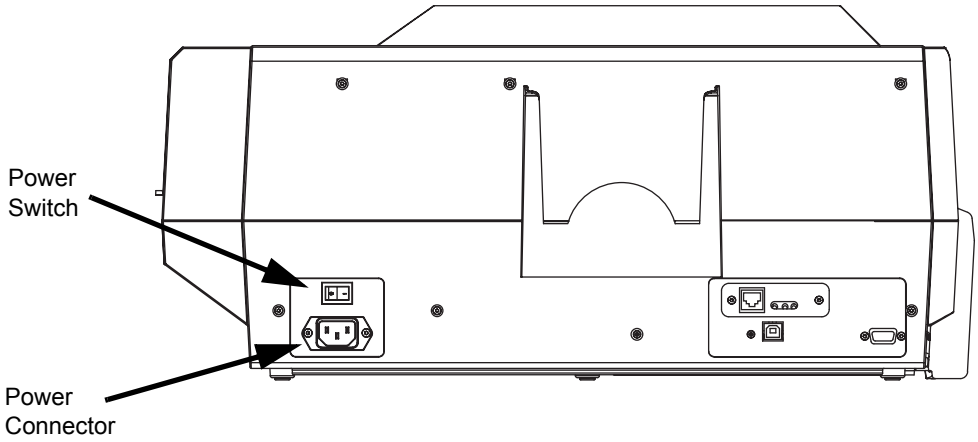
Important • Do not use both USB and Ethernet connections at the same time!

Important • Intermittent or unpredictable operation may occur from unsecured connectors. If damaged, the power cable must be replaced by an exact equivalent.

Connecting Power

The P430*i* Printer includes an internal AC power supply that accepts nominal input voltage in the range from 110 to 230 volts at 50 to 60 Hertz. The power source must be grounded.

Depending on specific model number, your P430*i* Printer will include one or two power cords; use the one that is appropriate for the AC power source connection at your location. If neither has an appropriate connector, AC power cords may be purchased locally; make sure it is a three-wire (grounded) cord.



1. Place the Printer's power switch in the OFF (**O**) position.
2. Depending on your local AC voltage, plug the appropriate power cord into the printer's power connector and a grounded AC power source connection.

Caution • If the power cord appears damaged in any way, or if the power cord will not securely plug into the Printer's power connector or the AC power source connection, **STOP!** Use of a damaged or incorrect power cord could cause equipment damage, result in an electrical fire, or possibly cause injury.

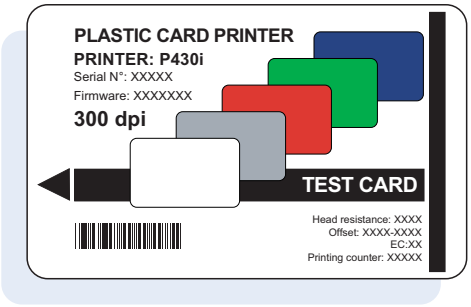
3. To turn the Printer on, set the Printer's power switch to the ON (|) position.

Printing a Test Card

With ribbon and cards loaded, your P430*i* Printer is ready to print. To check the operation of the printer, you should print a test card. (Printing a test card does not require that the printer be connected to your computer or network, but power must be applied.)

1. Set the printer's power switch (on the back of the printer) to the OFF (**O**) position.
2. While pressing the Printer's front panel button (next to the LCD display panel), switch the printer ON (|).
3. Hold the panel button until the LCD display panel reads "SELF TEST".
4. Release the panel button, and the test card will print.

This is an example of the test card:



Packing the P430*i* Printer for Shipment

If the P430*i* Printer is to be shipped, it is important to use the original packing and shipping material to prevent damage to the Printer. If the original material is lost, a replacement Shipping Kit can be ordered from your reseller.

Note • The specifics of the shipment and the printer's condition may influence which of the following steps are followed; common sense should prevail.

1. Remove cards in the card feeder:
   a. While the printer still has power applied and is turned on, and is still connected to the host computer, remove cards from the card feeder. The last card may be difficult to remove. If so, use the Eject Card command available through the driver on the host computer to eject the last card that is staged in the feeder.

Caution • Do not physically pull the last card out of the feeder staging area. This could damage the printer and void the warranty, as well as damage the card.

   b. Close the Card Feeder Cover.

2. If the printer still has power applied and is turned on, and is still connected to the host computer, set the printer's power switch (on the back of the printer) to the OFF (**O**) position, and disconnect the interface and power cables to the printer.
3. Open the Main Lid. Open the Print Head Carriage and remove the Ribbon. (If you wish to save the ribbon for future use, you may want to put it in a plastic bag for storage.)
4. Insert the print head protection pad, and close the Print Head Carriage. Remove the Card Cleaning Cartridge and place it in the upper foam insert. Close the Main Lid.
5. Slide the Output Hopper in all the way against the Printer.
6. Place the Printer in its protective plastic bag.
7. Place the lower foam insert in the lower part of the shipping carton.
8. Use both hands to carefully place the Printer into the recess in the lower foam insert.
9. Place the upper foam insert onto the Printer and gently press it down so it makes a snug fit on the Printer; the top of the upper foam insert should be even with the upper edge of the lower part of the shipping carton.
10. Slide the upper part of the shipping carton down over the lower part.
11. Insert and close the handles/latches.

3

Printing a Card

Printing with the P430*i* Card Printer is similar to printing with any other printer in a Windows environment.

- The Printer Driver Software is installed on your computer (see Chapter 2).
- The P430i Printer is connected to the power source and the computer (see Chapter 2).
- The P430i Printer is selected by either the Operating System or the appropriate application software program.
- Printer Properties are set (the factory default values will be appropriate for many applications).
- Card printing is directed by the appropriate application software program.

Setting Printer Properties

Printer Properties can be set either at the Operating System level or within the application software program used for printing cards.

Note • In the following description of setting Printer Properties, only those properties and options that are suitable for being set by the User are described. The User should not make selections or set parameters unless they are specifically described in this section

Preferences settings can configure the P430*i* Card Printer for Landscape (wide) or Portrait (tall) printing orientation, and allow the user to verify that the desired ribbon is installed in the printer. (Monochrome ribbons are selected via the drop-down menu.)

If the P430*i* Printer includes the optional magnetic card stripe encoder, encoding parameters and coercivity can be set.

Printer cleaning can be initiated from the Tools window (printer cleaning can also be initiated at the printer; see Chapter 4).

Also from the Tools window, the Test Card can be selected from several pre-loaded styles.

"Single Feed Options" allows Disabling or Enabling Single Feed Support.

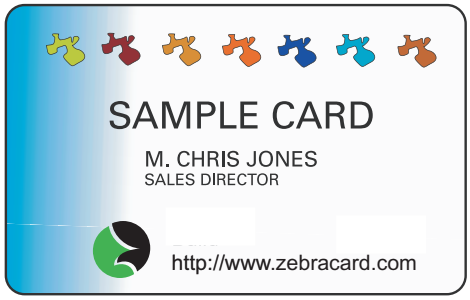
- If "Disable Single Feed Support" is selected, when the P430*i* Card Printer runs out of cards in the feeder, the LCD display will read OUT OF CARDS. To continue, press the panel button.
- If "Enable Single Feed Support" is selected, when the P430*i* Card Printer runs out of cards in the feeder it will wait until a card is inserted in the single-card slot or cards are loaded in the feeder, and then will automatically continue.

Printing a Sample Card

Sample card designs are installed with the printer driver. Sample cards require Microsoft Word or Microsoft P aint application software. The cards are accessed via the Start menu. Select Start, select Programs, select Zebra Card Printers, and select a sample card, or follow the directions below to design a card.

Follow these steps to design and print your first card:

1. Launch Microsoft Word Software. Depending on your computer configuration this may be done by double-clicking an icon on your desktop, or by clicking the Windows Start icon, selecting Programs, and navigating to Microsoft Word
2. Go to the **File** menu and choose **Page Setup**.
3. Select the **Paper Size** tab, choose **Card**. Under orientation, select **Landscape**.
4. Select the **Margins** tab, and set the Top, Bottom, Left, and Right margins to 0 (zero).
5. Click **OK** to close the **Page Setup** window.
6. The card appears on the screen.
7. Design a card with both black and colored text and with colored pictures (see example below).



Note • For cards thinner than 20 mils (0.51 mm) or thicker than 40 mils (1.02 mm), the card design must be limited to (1) no more than two 30 mm x 30 mm areas of full color, (2) black information (text and barcode, for example) must cover no more than 50% of the card area, and (3) there must be at least a 5mm unprinted border along all edges.

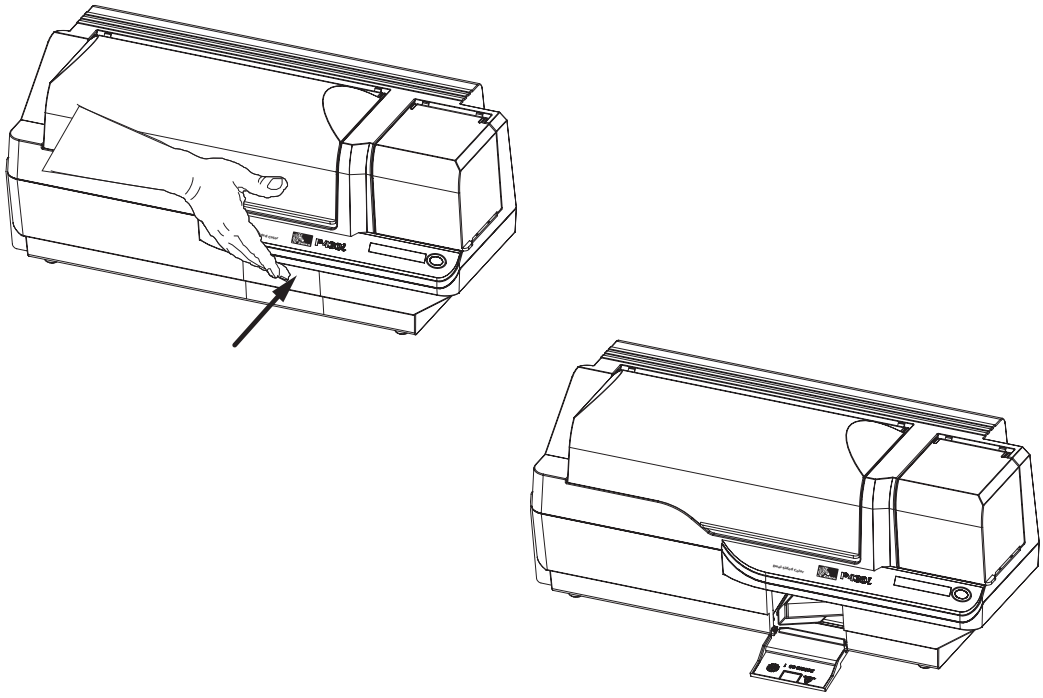
For cards with thickness between 20 mils (0.51 mm) and 40 mils (1.02 mm), these restrictions do not apply; full color printing is permitted edge to edge in both directions.

8. Once you are ready to print, go to the **File** menu and select **Print**.
9. If the printer was not selected as the default printer, go to the File menu, select **Print Setup** and choose **Zebra P430*i* Card Printer** from the printer names list. Then **Close** the **Print Setup** dialog box.

10. The printer will feed in a card and start printing (the data download time will vary depending on the complexity of the card design and the processing speed of your computer).
11. Once the printing job is complete, the card is ejected from the printer into the Output Hopper.

Removing Rejected Cards

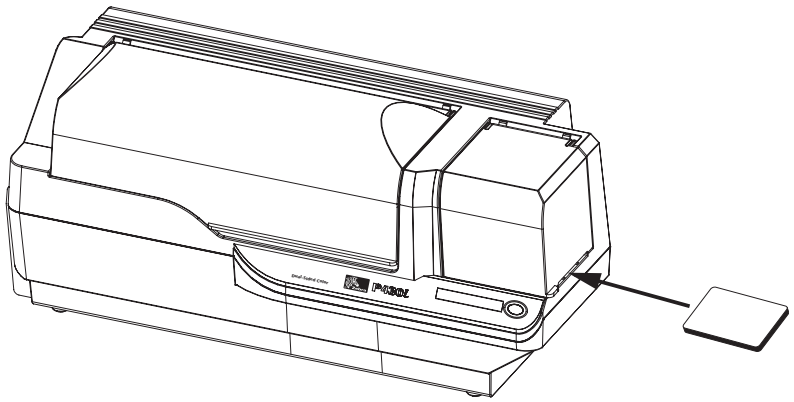
While encoding either magnetic stripe cards or smart cards, if a card fails encoding it is directed to the reject bin. The reject bin has a capacity of about 20 cards. Rejected cards can be removed while the printer remains in normal operation. To remove cards from the reject bin, press the reject bin door to open it, and remove the rejected cards. Then close the reject bin door; it will remain latched in the closed position.



Feeding One Card at a Time

A Manual Feed Slot is available below the Card Input Hopper for feeding single cards. The Card Input Hopper must be empty for single-card feeding to work properly.

1. Open the Card Feeder cover. Verify that there are no cards in the feeder, then close the Card Feeder cover.
2. Insert a single card into the slot below the Card Feeder. Do not feed more than one card at a time.



Note • If single-card feeding will be the normal mode of operation, you may select that mode through the driver software. In single-card feed mode, the card will not be printed until the print job has been sent to the printer and the card to be printed has been inserted into the single-card feed slot

4 Cleaning

Caution • PROTECT YOUR FACTORY WARRANTY!

The recommended cleaning procedures must be performed to maintain your factory warranty. Other than the recommended cleaning procedures described in this manual, allow only Zebra authorized technicians to service the P430*i* Printer.

NEVER loosen, tighten, adjust, bend, etc., any part or cable inside the printer.

NEVER use a high pressure air compressor to remove particles in the printer.

Cleaning the Printer

Clean your P430*i* Printer using Pre-Saturated Cleaning Cards provided. The regular use of these cards will clean and maintain important parts of your printer that cannot be reached, including the Print Head, Transport Rollers, and optional Magnetic Encoder Station.

When to Clean

When the LCD Panel displays the message **CLEAN PRINTER**.

Approximately every 1000 cards when using 5-panel color ribbon, or every 5000 cards when using a monochrome ribbon.

How to Clean

Note • This cleaning procedure uses two cleaning cards. One cleaning card is the size of a regular plastic card, and is referred to as the "cleaning card." The other is elongated, with a wider section at one end; it is referred to as the "long cleaning card."

1. Leave the Printer power on, or turn it on if it was off.
2. Initiate the cleaning process by either of the following methods:
   - At the printer, press and hold the panel button for several seconds, until the LCD Panel displays the message **REMOVE RIBBON THEN CLOSE HEAD**.
   - From the computer, enter the P430*i* Printer Tools software, and click on the CLEAN button. The LCD Panel will display the message **REMOVE RIBBON THEN CLOSE HEAD**.
3. Open the Main Cover, release the Print Head Carriage, and remove the ribbon. Then close the Print Head Carriage. (For details, see Chapter 2.) The LCD Panel will display the message **EMPTY FEEDER & P RESS BUTTON**.
4. Open the Card Feeder Cover and remove cards from the Card Feeder. The last card is difficult to remove; leave it in place. Press the Panel Button on the front of the printer. The card remaining in the feeder will be ejected. The LCD Panel will then display the message **LOAD CLEANING CARD IN FEEDER**.
5. Place a pre-saturated Cleaning Card into the Card Feeder. The Cleaning Card will automatically feed into the printer and the cleaning process will start (there is a several second delay after the Cleaning Card feeds before the cleaning movement starts). While the cleaning process is underway, the LCD Panel will display the message **CLEANING PRINTER**.
6. At the conclusion of this part of the cleaning process, the Cleaning Card will be ejected, and the LCD Panel will display the message **PRESS BUTTON TO CONTINUE.**
7. After the user presses the panel button, the LCD Panel will display the message **FEED LONG CLEANING CARD IN EXIT.** Insert the long end of the long cleaning card into the card exit (directly above the Output Hopper). If the user inserts a "regular" cleaning card into the card exit, the LCD Panel will display the message **INVALID CARD, PRESS BUTTON** until the user presses the panel button and inserts the long cleaning card into the card exit.

Note • If the user does nothing at this point (i.e., does not insert the long cleaning card), after a timeout the LCD Panel display will change to **CLEAN PRINTER**. The printer will be able to print, but the LCD Panel will continue to display **CLEAN PRINTER**.

This limited cleaning does not do a thorough cleaning, but may be performed if no "long cleaning cards" are available.

To restore the display to **READY**, you will need to perform a complete cleaning process, using both short and long cleaning cards, from step 2 above through step 9 below.

8. The long cleaning card will automatically feed into the printer and the printing process will continue. The LCD Panel will again display the message **CLEANING PRINTER**.
9. When the cleaning process is completed, the long cleaning card will be ejected and the LCD Panel will display the message **READY**, indicating that the printer is ready to resume normal printing operations.

10. Discard both cleaning cards after a single use.

Note • Do not use previously used cleaning cards.

Cleaning the Print Head

A cleaning using the Cleaning Cards usually suffices. However, a separate Print Head cleaning can remove more stubborn deposits when print anomalies persist. To avoid deposits, only use foam-tipped swabs.

1. Place the printer power switch in the OFF (**O**) position.
2. Open the Main Cover, release the Print Head Carriage, and remove the ribbon. Leave the Print Head Carriage in its raised position. (For details, see Chapter 2.)
3. Clean Print Head by moving an alcohol-moistened swab tip side-to-side across the Print Head elements. Only use moderate force. To re-order swabs, please refer to the Media List on the Windows Drivers and User Documentation CD supplied with this printer.
4. The swabs can also be used in a similar manner to clean the optional magnetic encoding head.

Caution • Never use a sharp object or any abrasive to scrape deposits from the print head. Permanent damage to the print head will result.

Caution • Do not touch the print head if the printer has been in service in the last 10 minutes. It could be very hot and cause a burn.

Card Cleaning Cartridge

Your P430*i* Printer includes a Card Cleaning Cartridge. This item cleans the cards entering the printer through the card feeder. To ensure print quality, the cleaning roller requires periodic replacement. New cleaning rollers are included with each ribbon or may be purchased separately. (To reorder, please refer to the Media List on the Windows Drivers and User Documentation CD supplied with this printer.)

Installation of the Card Cleaning Cartridge is described in Chapter 2 and is not repeated in detail here.

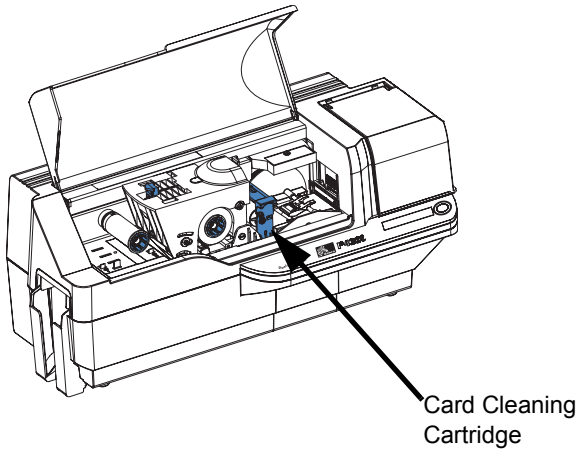
Note • Before replacing the Card Cleaning Cartridge or its cleaning roller, clean the Printer using the Cleaning Cards as described earlier in this chapter.

When to Replace the Cleaning Roller

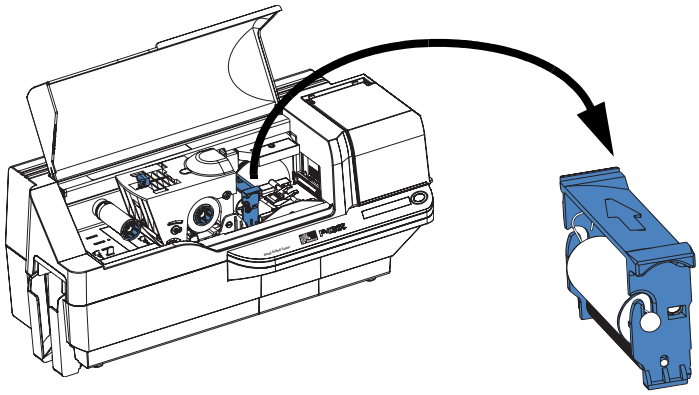
Replace the Cleaning Roller each time you install a new ribbon.

How To Replace the Cleaning Roller

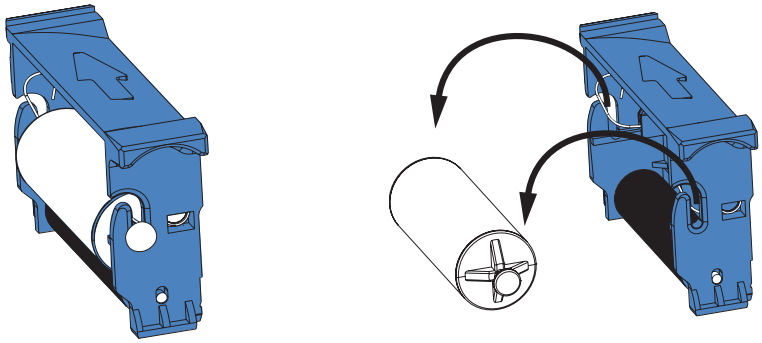
1. Open the Main Lid and locate the Card Cleaning Cartridge.



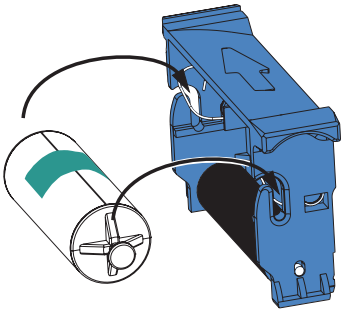
2. Gently remove the Card Cleaning Cartridge. Lift the “handle” end, and then pull it away from the printer.



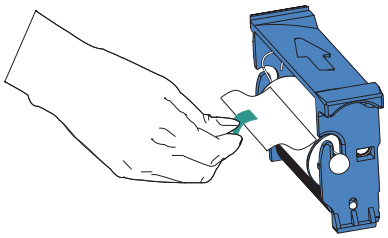
3. Remove the cleaning roller from the Card Cleaning Cartridge and discard.



4. Install new cleaning roller into the Card Cleaning Cartridge. To avoid contamination, always hold the cleaning roller by the ends. (For replacement cleaning rollers, please refer to the Media List on the Windows Drivers and User Documentation CD supplied with this printer.)

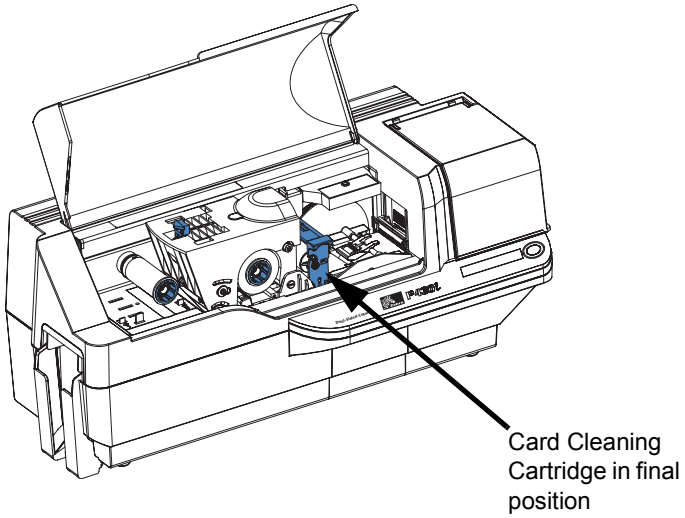


5. Peel protective wrapper from the cleaning roller by gently pulling on the tape.



Note • DO NOT touch the adhesive roller surface that contacts the cards.

6. Replace the Card Cleaning Cartridge into the printer. For detailed instructions, see *Installing the Card Cleaning Cartridge* on page 14.



7. Close the printer Main Lid.

5

Troubleshooting

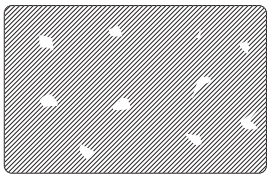
The table on the next page offers causes and solutions to symptoms related to improper operation. Check the table when experiencing any loss of operation or print quality.

Problem / Description	Cause / Solution
The LCD Panel displays **OUT OF CARDS** message.	1. Check for cards in the card feeder. If no cards present, load cards. 2. Check that Card Thickness Control lever is properly adjusted (see Loading Cards in Chapter 2). 3. Press the Panel Button for 1 second. The printing job will restart.
The LCD Panel displays **OUT OF RIBBON** message.	1. Check ribbon. Replace if defective or entirely used. Ribbon will automatically synchronize and printing will restart with a new card.
The LCD Panel displays **PRINT HEAD OPEN** message.	1. Check that Print Head Carriage is closed and latched. If not, close and latch it.
The LCD Panel displays **MECHANICAL ERROR** message.	1. Check that you are using the correct card type (see Technical Specifications). 2. Check that Card Thickness Control lever is properly adjusted (see Loading Cards in Chapter 2). 3. If 2 cards are fed into the printer at the same time: Open cover and remove Card Cleaning Cartridge, empty the Card Feeder, and pull the jammed cards out. Replace the Card Cleaning Cartridge. Remove cards from Card Feeder, separate them as shown in Loading Cards in Chapter 2, and replace. 4. Check that ribbon is loaded correctly.
The LCD Panel displays **ENCODING ERROR** message.	1. Check that you are using the correct magnetic card type (for low or high coercivity encoding). 2. Verify command syntax. 3. Contact Zebra technical support.
The LCD Panel displays **CLEAN PRINTER** message.	1. Printer cleaning required (see Chapter 4).

Print Quality Issues

This section will help you resolve print quality problems. The print quality is dependent on several factors. The two most important factors that will increase your print quality are cleanliness and card stock. To diagnose and fix print quality problems, follow the troubleshooting procedures below:

Example 1 • Small spots appear on the printed card with a non-printed area or a different color.



Possible Cause:

- Contamination on the card surface.

Solutions:

- Check that cards are stored in a dust free environment.
- Use a different supply of cards.

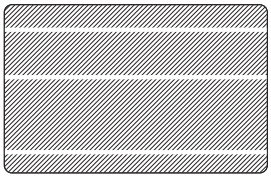
Possible Cause:

- Dust inside the printer and/or dirty Cleaning Roller.

Solutions:

- Perform a Cleaning of the printer (see Chapter 4).
- Replace Cleaning Roller (see Chapter 4).

Example 2 • There are non-printing horizontal lines (white) on the card surfaces.



Possible Cause:

- Ribbon cartridge is not correctly positioned.

Solutions:

- Ensure that the ribbon is properly rolled onto the ribbon cores of the cartridge and that there are no wrinkles in the ribbon.
- Replace ribbon cassette, making sure it locks in place.

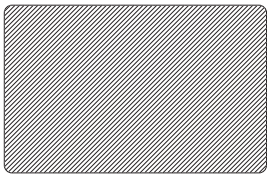
Possible Cause:
- Print Head is dirty.

Solution:
- Clean the Print Head

Possible Cause:
- Print Head elements are damaged (e.g., scratched or burnt).

Solution:
- Call Zebra Customer Service for Print Head replacement information.

Example 3 • Printing shows very pale, very dark, or inconsistent results



Possible Cause:
- Ribbon has been stored improperly or is damaged.

Solution:
- Change ribbon and print again.

Possible Cause:
- Cards may not meet specifications.

Solution:
- Use a different supply of cards.

Possible Cause:
- Contrast and/or Intensity may be set to incorrect values.

Solution:
- Adjust Contrast and/or Intensity values in software.

Possible Cause:
- Head Settings are too low / high.

Solution:
- Adjust Head Settings higher / lower.

Possible Cause:

- Dust or embedded contamination on elements of the Print Head.

Solution:

- Perform a Cleaning of the Print Head (see Chapter 4).

Example 4 • Printing shows blurry printed image.

Possible Cause:

- Ribbon cartridge may not be correctly positioned.

Solution:

- Check that the ribbon is properly rolled onto the ribbon cores of the cartridge.
- Replace ribbon cartridge, making sure it locks in place, and print again.

Possible Cause:

- Ribbon may not be synchronized on the correct color panel position.

Solution:

- Open the Print Head Carriage, then close it. This will cause the ribbon to re-synchronize.

Possible Cause:

- Cards may not meet specifications.

Solution:

- Use a different supply of cards.

Possible Cause:

- Dust or embedded contamination inside the printer and/or dirty Cleaning Roller.

Solution:

- Clean the Print Head.
- Replace the Cleaning Roller.

Example 5 • No printing on the card.

Possible Cause
- Ribbon may not be installed in the printer.

Solution:
- Check for ribbon in the printer.

Possible Cause
- Cards may not meet specifications.

Solution:
- Use a different supply of cards.

Possible Cause
- Print Head elements may be scratched or burnt.

Solution
- Call Service for Print Head replacement information.

Example 6 • Only one panel of a color ribbon prints.

Possible Cause
- Using the wrong type of ribbon.

Solution:
- Use only *i* Series ribbons for full color printing.

Note • For optimum print quality, always keep the Main Cover and the Card Feeder Cover of the printer closed.

Troubleshooting the Ethernet Connection and Adapter

Resetting to Factory Defaults

To reset the Ethernet Adapter configuration parameters to the factory defaults, press the Panel Button and hold it in while turning the printer power on. Keep the Panel Button pressed until the Status Indicator light turns green, then release the Panel Button. To print a configuration card, press and hold the Ethernet switch.

Ethernet Adapter Status Indicator

A bi-color Status Indicator displays the operational status of the Ethernet Adapter.The following conditions might occur:

1. During normal operation, the LED is solid **green** for more than 30 seconds. This indicates all the hardware is functioning properly and the Ethernet Adapter has detected the presence of the network. It does not mean the Ethernet Adapter has an IP address or is attached to a printer queue.
2. If the LED is rapidly flashing **green** (9 times/sec), the Ethernet Adapter has not detected the presence of a network cable. To solve the problem:
   - Verify that the network cable is appropriate for the network and has an RJ-45 connector.
   - Turn the printer power off (**O**). Remove the network cable from the Ethernet Adapter. Plug the network cable back in until you hear a positive click. Check the other end of the cable in the same manner. Turn the printer power on; if the Ethernet Adapter still does not detect a cable, continue.
   - Connect the Ethernet Adapter to a known good network connection. If the Ethernet Adapter is still unable to detect the network cable, contact Technical Support for assistance.
3. If the LED is slowly flashing green (1 time/sec), the Ethernet Adapter is trying to print a job. If the job does not print, check the following:

Important • Cables with a rating higher than CAT-6 have **not** been tested.

   - Verify that the printer has media and ribbon. If the printer is showing any errors, it is unlikely that the Ethernet Adapter can send data to the printer. The LED continues to blink until the printer malfunction is resolved or until the printer is turned off **(O)**.
   - Flashing red indicates the Power On Self Test (POST) is in progress.
4. If the LED is solid **red** for more than 30 seconds, the Ethernet Adapter has failed the POST. A failed POST can be caused by any of the following:
   - The printer attached to the Ethernet Adapter device is malfunctioning. Turn the printer power off, wait 10 seconds, then turn the printer back on **(|)**.
   - If the Ethernet Adapter still fails the POST, the Ethernet Adapter has a hardware problem that can be fixed only by replacing or returning the unit. Contact Technical Support for repair or replacement information.
5. If the LED is alternately flashing **red** and **green** for longer than 2 minutes, the Ethernet Adapter is in firmware-download mode. This means it is waiting for new firmware data to be sent before it continues normal functioning. Perform the following:
   - If the Ethernet Adapter was purposely put into firmware-download mode, finish the download with the proper update utility. Contact the Zebra web site at **http://www.zebra.com** to download this utility.
   - Contact Technical Support for help recovering this unit.

Network Status/Activity Indicator

A bi-color Status/Activity LED indicates network speed, established link, and network activity.

1. If the LED is off, no link was established.
2. If the LED is solid **green**, a 100Base link is established.
3. If the LED is flashing **green**, a 100Base link is established and network activity has been detected.
4. If the LED is solid **orange**, a 10Base link is established.
5. If the LED is flashing **orange**, a 10Base link was established and network activity has been detected.

Network activity detected by this LED does not mean the activity is data for the print server. The activity is all activity on the network seen on the Ethernet Adapter.

6

Technical Specifications

General Specifications

- Full color dye-sublimation or monochrome thermal transfer card printing
- 102 cards per hour (31.8 seconds per card) double-sided printing, YMCKO front, K back

Ribbon Specifications

- Patented ribbon core and spindle system
- *i* Series technology featuring RFID

Note • "*i* Series" Printers require the use of "*i* Series" ribbons for full color printing. For more information about Card Media and Ribbons available from Zebra Technologies Corp., please refer to the Media List on the Windows Drivers and User Documentation CD supplied with this printer.

Card Specifications

- Types: PVC or Composite
- Card Width/length ISO CR-80 - ISO 7810, 2.125" (54 mm) x 3.375" (86 mm)
- Option: Magnetic Stripe - ISO 7811
- Card thickness: 10-60 mil (0.25-1.5 mm) ± 10%
- Card feeder capacity: up to 100 cards (30mil) (Optional high-capacity feeder: up to 220 cards)
- Reject card bin capacity: 20 cards (30 mil)
- Card output hopper capacity: 100 cards (30mil)

Bar Codes

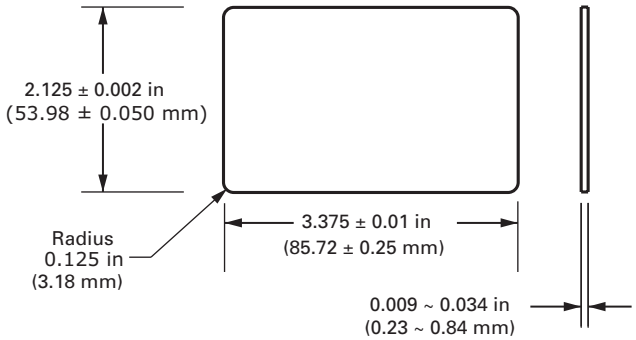
- Code 39, Code 128 B & C with & without check digit
- 2 of 5 and 2 of 5 interleaved
- UPC-A, EAN8, and EAN13
- PDF-417 2D bar code and other symbologies available via Windows printer driver

Fonts

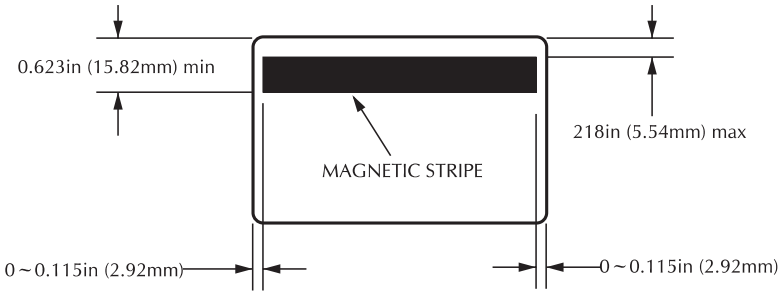
- Arial and Arial Bold
- True Type fonts available via Windows Driver

Card Dimensions

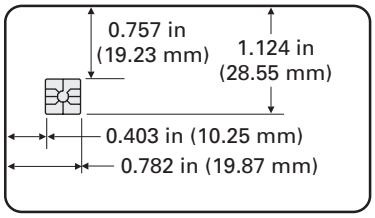
ISO Standard 7810 Dimensions for Plain Card



ISO Standard 7811 Dimensions for Magnetic Stripe Card



Contact Location for Smart Card ISO Standard 7816



ISO 7816 Cards

Bi-Directional Communications Interfaces

- USB
- Built-in Ethernet (optional)

Mechanical Specifications

- Width: 26 in (661 mm)
- Depth: 10 in (254 mm)
- Height: 11 in (279 mm); 12 in (305 mm) with extended feeder
- Weight: 20 lbs (9.1 kg)

Electrical

- 100 – 230 Volts AC ± 10% (99 - 254 V), 60 ~ 50 Hz ± 3Hz (47 - 63 Hz)
- 110 V: 1.40A; 230 V: 0.8A
- FCC Class A, CE, UL, and CUL approved

Environmental

- Operating Temperature: 59°F to 85°F (15°C to 35°C)
- Operating Humidity: 20% to 65% non condensing
- Storage Temperature: 23°F to 158°F (-5°C to 70°C)
- Storage Humidity: 20% to 70% non-condensing
- Ventilation: Reasonably dust free air environment

Options

- Built-in 10/100 Mbps Ethernet network communications
- Three track magnetic stripe encoder (standard and reverse)
- High capacity feeder (220 30-mil cards)
- Contactless encoding (MIFARE and HID iCLASS)
- Contact encoding (Station and encoder)

APPENDIX A

Magnetic Card Stripe Encoder

Introduction

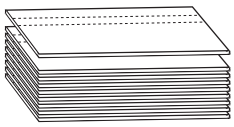
This Appendix includes operation and maintenance requirements for the P430*i* Printer with the optional magnetic card stripe encoder. (See Chapter 2 for location of the Magnetic Card Stripe Encoder.)

The magnetic encoder can be set for either high or low coercivity. Use the printer driver to change the encoder setting.

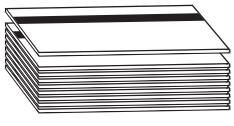
Media Loading Orientation

The magnetic encoder may be installed with the read/write head positioned below the card path. Magnetic Card Stripe Encoder upgrade kits are also available.

When loading cards with magnetic stripes into the card feeder, please ensure that the magnetic stripe is down and nearer to the rear of the printer.



Also available are Printer models with the Magnetic Read/Write head positioned above the card path. When loading cards into one of these models, ensure that the magnetic stripe is up and nearer to the rear of the printer.



Sample Encoding Program

Refer to the Programmer's Manual (document number 980415).

Note • ONLY USE cards that comply with ISO 7810 and 7811 standards for magnetic stripe cards. The magnetic stripe must be flush to the surface of the card to work properly. Never use cards which have taped-on magnetic stripes.

Magnetic Encoder Cleaning

The Magnetic Encoder Read/Write Head is cleaned as part of the printer cleaning process. If the frequency of encoding errors increases, the magnetic encoder head may need cleaning.

When to Clean

When the LCD Panel displays the message **ENCODING ERROR** at an increasing frequency.

How to Clean

1. Leave power on.
2. Press and hold the front panel button for a few seconds.
3. Open the Main Lid and release the Print Head Carriage latch, raise the Print Head Carriage, and remove the ribbon. Close the Print Head Carriage.
4. Close the Main Lid.
5. Open the Card Feeder cover and remove any cards.
6. Insert a Pre-Saturated Cleaning Card (provided) into the slot below the Card Feeder. The cleaning card will feed into the printer and carry out the cleaning process. Repeat the process with a new cleaning card if necessary.
7. Additional cleaning of the magnetic head can be accomplished using the alcohol-soaked swabs provided with the printer. Follow the directions given in Section 4.

ISO Standard Encoding

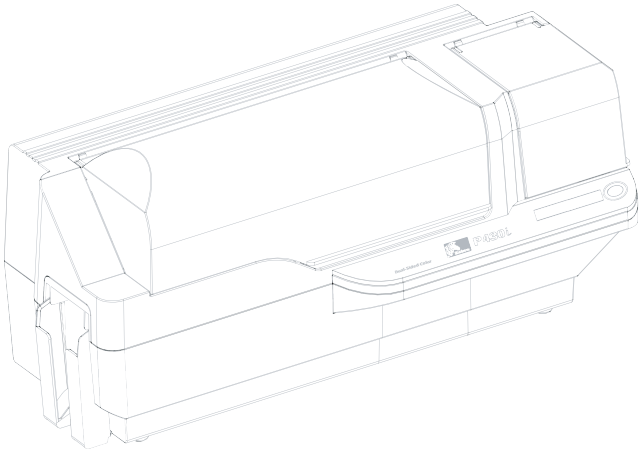
Track #	Field Separator	Track Density	Valid Characters	# of characters
1	^	210 BPI*	Alphanumeric (ASCII 20~95†)	79‡
2	=	75 BPI*	Numeric (ASCII 48~62)	40‡
3	=	210 BPI*	Numeric (ASCII 48~62)	107‡

*Bits per inch

†Except the "?" character

‡Including Start, Stop, and LRC characters. Also note that these 3 characters are automatically managed by the magnetic encoder according to the ISO Standard Norms.

Note • Refer to the Card Printer Programmer's Manual for complete programming information.



APPENDIX B

Smart Card Contact Station

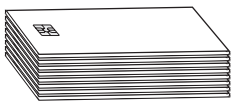
This section contains information on the additional operations of a P430*i* Printer equipped with the optional Smart Card Contact Station. (See Chapter 2 for location.)

Introduction

Smart Cards can have a built-in microcomputer and/or memory to store fingerprints, voice recognition patterns, medical records, and other such data. The P430*i* Printer may be equipped with an optional contact station for programming Smart Cards (ISO 7816). This printer model responds to commands that position the card at the contact station, where the printer connects to the contacts on the Smart Card. All other printer operations remain the same as the standard P430*i* model.

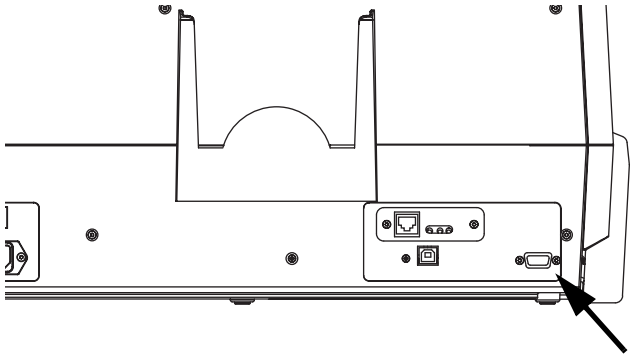
Media Loading Orientation

Orient the cards with the gold-plated Smart Card contacts at the top surface of the card and facing to the left.



Smart Card Contact Station Interface

When a command to the printer interface sends a card to the Smart Card Contact Station, the printer connects the Smart Card Contact Station to the female DB-9 connector on the rear of the printer.



DB-9 Connector location for
Smart Card Contact Station

An attached external Smart Card Programmer can be used to program Smart Card chips. The following table shows the Smart Card Contact Points.

DB-9 Pin	Smart Card Contact Points	DB-9 Pin	Smart Card Contact Points
1	C1 (VCC)	6	C6 (Vpp)
2	C2 (Reset)	7	C7 (I/O)
3	C3 (Clock)	8	C8 (RFU)
4	C4 (RFU)	9	(GND when chip is at station)
5	C5 (GND)		

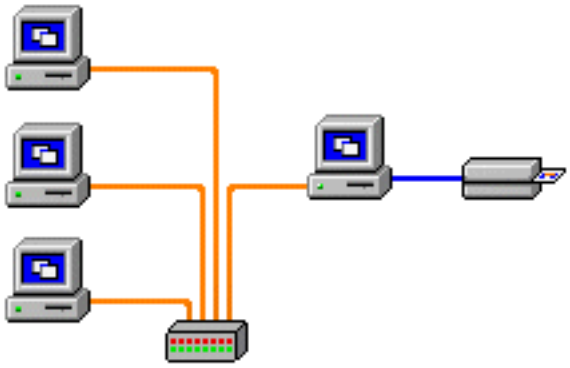
APPENDIX C

Connecting to a Network

Card printers can be connected to an Ethernet network in three ways.

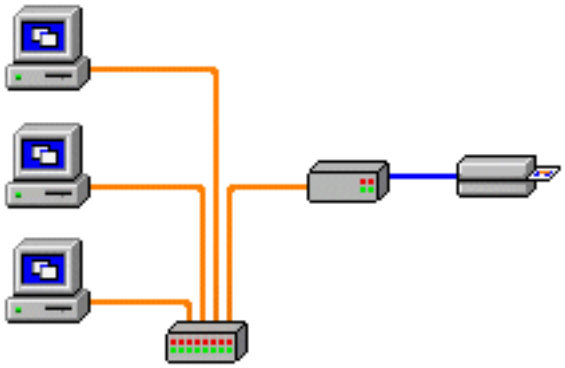
Printer Sharing

In printer sharing, the printer is connected locally to the host computer and configured to be shared to other client computers. Client computers connect to the printer over the network through the host computer.



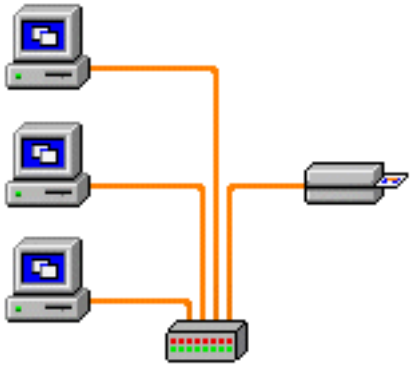
External Print Server

A stand alone device that acts as a server on the network specifically for receiving print jobs and passing them to the printer. Client computers connect to the print server over a network.



Internal Print Server

Similar to an external print server, except the print server is integrated into the printer. This removes the need for a separate power supply and separate device drivers. This is the simplest way to network a printer.



APPENDIX D

Worldwide Sales & Support

Sales and Support Locations

Zebra Technologies
Card Printer Solutions
1001 Flynn Road
Camarillo, CA 93012-8706 USA
Phone: + 1 (805) 579 1800
Fax: + 1 (805) 579 1808
Toll free in US: (800) 452-4056
e-mail: cards@zebra.com

Zebra Technologies
Card Printer Solutions, Europe, Middle East, Africa
The Valley Centre, Gordon Road, High Wycombe
Buckinghamshire HP13 6EQ, England
Phone: + 44 (0) 870 241 1527
Fax: + 44 (0) 870 241 0765
e-mail: eurosales@zebra.com

Zebra Technologies
Card Printer Solutions, Latin America
9800 NW 41st Street, Suite 220
Doral, FL 33178 USA
Phone: + 1 (305) 558 8470
Fax: + 1 (305) 558-8485
e-mail: latinsales@card.com

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